

AAIB Bulletin No: 1/96

Ref: EW/G95/10/06

Category: 1.3

Aircraft Type and Registration:	Druine D.31 Turbulent, G-ASPU	
No & Type of Engines:	1 Volkswagen 1500 piston engine	
Year of Manufacture:	1966	
Date & Time (UTC):	8 October 1995 at 0900 hrs	
Location:	Hurst Green, East Sussex	
Type of Flight:	Private	
Persons on Board:	Crew - 1	Passengers - None
Injuries:	Crew - None	Passengers - N/A
Nature of Damage:	Damage to propeller and canopy, slight damage to right wing and left fuselage	
Commander's Licence:	Private Pilot's Licence	
Commander's Age:	42 years	
Commander's Flying Experience:	390 hours (of which 24 were on type) Last 90 days - Not known Last 28 days - Not known	
Information Source:	Aircraft Accident Report Form submitted by the pilot, recorded weather data supplied by the Met Office	

The pilot reported that the aircraft climbed normally to a height of approximately 300 feet, at which point the engine gradually lost power. Carburettor heat was applied and the engine began to misfire badly. Insufficient power remained available for the aircraft to maintain height, so the pilot chose a field in which he then landed heavily. The aircraft swerved and the right main landing gear leg failed. The aircraft then nosed over and the pilot switched off the magnetos before crawling out. He considered that the full harness was most effective in protecting him from any injury.

The pilot believes that the accident was caused by induction system icing. Prior to takeoff, the engine was run at fast idle for approximately 5 minutes, before power checks were carried out satisfactorily. The aircraft was then taxied a few yards to the start of the runway. The pilot considers that this process did not warm the engine oil sufficiently for its normal heating action on the manifold to become effective. At the time of the accident the grass surface was damp with dew and there was no wind.

Recorded meteorological data for the general area at that time indicates a temperature of approximately 18°C with a dewpoint of 15°C and a wind speed of 5 to 7 kt. These conditions would be conducive to serious formation of carburettor ice at cruise power in conventional aircraft carburettors. Shortly before the accident time, the recorded meteorological data for the area shows corresponding temperatures of 13 and 14°C respectively with little or no wind. These temperatures correspond to very serious carburettor icing under any circumstances. Since the wind conditions reported by the pilot at the time of the accident are similar to the earlier meteorological observation for the general area, it can be assumed that those temperature and humidity conditions recorded at that earlier time persisted or were little changed in the immediate locality of the airstrip up to the time of the accident.